	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L1	2251	anti$1angiogenic	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:24			0
2	BRS	L2	9579	copper adj ion	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:26			0
3	BRS	L3	0	dipeptide same complex$2 same 2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:31			0
4	BRS	L4	507016	copper	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:26			0
5	BRS	L5	19	dipeptide same complex$2 same 4	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:28			0
6	BRS	L6	17	glu-trp	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:28			0
7	BRS	L7	0	6 same complex$2 same 4	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:28			0
8	BRS	L8	0	1 same 5	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:28			0
9	BRS	L9	15	dipeptide same chelat$3 same 4	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:31			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
10	BRS	L11	4	antitumor same (shark adj cartilage)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:33			0
11	BRS	L12	0	10 same 11	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:33			0
12	BRS	L10	29	5 or 9	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:55			0
13	BRS	L13	0	10 same 1	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:42			0
14	BRS	L14	16	dupont adj eric.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:55			0
15	BRS	L15	10	lessard adj denis.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:55			0
16	BRS	L16	0	dimitriadou adj violetta.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:56			0
17	BRS	L17	4	falardeau adj pierre.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:57			0
18	BRS	L18	3	poyet adj patrick.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:57			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
19	BRS	L19	0	(14 or 15 or 17 or 18) and 10	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 14:58			0

=> d his

(FILE 'HOME' ENTERED AT 15:17:39 ON 21 APR 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
15:18:00 ON 21 APR 2003
L1 4690 S ANTI-ANGIOGENIC
L2 1068654 S COPPER
L3 560 S L2 (P) DIPEPTIDE (P) (COMPLEX? OR CHELAT?)
L4 14 S L3 (P) (1:2)
L5 7 DUPLICATE REMOVE L4 (7 DUPLICATES REMOVED)
L6 58438 S ANTI-TUMOR OR ANTI-NEOPLASTIC
L7 655 S SHARK CARTILAGE
L8 23 S L6 (P) L7
L9 0 S L3 AND L8

=> log y

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FILE 'HOME' ENTERED AT 15:17:39 ON 21 APR 2003

=> file medline caplus biosis embase scisearch agricola
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

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FILE 'CAPLUS' ENTERED AT 15:18:00 ON 21 APR 2003
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FILE 'AGRICOLA' ENTERED AT 15:18:00 ON 21 APR 2003

=> s anti-angiogenic
L1        4690 ANTI-ANGIOGENIC

=> s copper
L2     1068654 COPPER

=> s l2 (p) dipeptide (p) (complex? or chelat?)
L3         560 L2 (P) DIPEPTIDE (P) (COMPLEX? OR CHELAT?)

=> s l3 (p) (1:2)
L4          14 L3 (P) (1:2)

=> duplicate remove l4
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L4
L5             7 DUPLICATE REMOVE L4 (7 DUPLICATES REMOVED)

=> d l5 1-7 ibib abs

L5   ANSWER 1 OF 7     MEDLINE                          DUPLICATE 1
ACCESSION NUMBER:   2003108968     IN-PROCESS
DOCUMENT NUMBER:    22464596   PubMed ID: 12576272
TITLE:              Dipeptides containing the alpha-aminoisobutyric residue
                    (Aib) as ligands: preparation, spectroscopic studies and
                    crystal structures of copper(II) complexes with H-Aib-X-OH
                    (X=Gly, L-Leu, L-Phe).
AUTHOR:             Tiliakos Manolis; Katsoulakou Eugenia; Nastopoulos
                    Vassilios; Terzis Aris; Raptopoulou Catherine; Cordopatis
                    Paul; Manessi-Zoupa Evy
CORPORATE SOURCE:   Department of Pharmacy, University of Patras, GR 265 04
                    Patras, Greece.
SOURCE:             JOURNAL OF INORGANIC BIOCHEMISTRY, (2003 Jan 15) 93 (3-4)
                    109-18.
                    Journal code: 7905788. ISSN: 0162-0134.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE:         Entered STN: 20030308
                    Last Updated on STN: 20030308
AB   Synthetic procedures are described that allow access to new   ***copper***
     (II)   ***complexes***   with   ***dipeptides***   containing the
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alpha-aminoisobutyric resid[redacted](Aib) as ligands. The solid [redacted] ***complexes*** [Cu(H(-1)[redacted](A))](n).nH(2)O (1) (L(A)H=H-A[redacted]Gly-OH), [Cu(H(-1)L(B))(MeOH)](n).nMeOH (2) (L(B)H=H-Aib-L-Leu-OH) and [Cu(H(-1)L(C))](n) (3) (L(C)H=H-Aib-L-Phe-OH) have been isolated and characterized by single-crystal X-ray crystallography, solid-state IR spectra and UV-Vis spectroscopy in solution (H(-1)L(2-) is the dianionic form of the corresponding ***dipeptide***). ***Complexes*** 1 and 3 are three-dimensional coordination polymers with similar structures. The doubly deprotonated ***dipeptide*** behaves as a N(amino), N(peptide), O(carboxylate), O'(carboxylate), O(peptide) mu(3) ligand and binds to one Cu(II) atom at its amino and peptide nitrogens and at one carboxylate oxygen, to a second metal at the other carboxylate oxygen, while a third Cu(II) atom is attached to the peptide oxygen. The geometry around ***copper*** (II) is distorted square pyramidal with the peptide oxygen at the apex of the pyramid. The structure of 2 consists of zigzag polymeric chains, where the doubly deprotonated ***dipeptide*** behaves as a N(amino), N(peptide), O(carboxylate), O'(carboxylate) mu(2) ligand. The geometry at ***copper*** (II) is square pyramidal with the methanol oxygen at the apex. The IR data are discussed in terms of the nature of bonding and known structures. The UV-Vis spectra show that the solid-state structures of ***1*** , ***2*** and 3 do not persist in H(2)O.

L5 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:131866 CAPLUS
DOCUMENT NUMBER: 124:213155
TITLE: Ternary complexes of copper(II) involving dipeptides and aromatic amines: Effect of .pi.-acidity of aromatic amines on the deprotonation of the peptide group in the ternary complex
AUTHOR(S): Chakraborty, D.; Bhattacharya, P. K.
CORPORATE SOURCE: Faculty Science, M. S. University Baroda, Baroda, 390 002, India
SOURCE: Indian Journal of Chemistry, Section A: Inorganic, Bio-inorganic, Physical, Theoretical & Analytical Chemistry (1996), 35A(1), 37-40
CODEN: ICACEC; ISSN: 0376-4710
PUBLISHER: Publications & Information Directorate, CSIR
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Equil. consts. were measured potentiometrically in 50% aq. dioxane at 30.degree. and ionic strength 0.2 ($NaClO_4$) for Cu(II)-arom. amine(A)-dipeptide(L) mixed-ligand complexes. The arom. amines (A) were 5-nitro-1,10-phenanthroline (Nphen), 2,2'-pyridylbenzimidazoline (pybz), 1,10-phenanthroline (phen), and 2,2'-pyridylimidazoline (pyz). The dipeptides were glycylglycine (gg), glycyl-L-alanine (ga), and glycyl-L-leucine (gl). The formation of 2 types of ternary complexes was detected at different pH. The formation consts. are compared with those for Cu-ethylenediamine (en)-dipeptide systems. The effect of increasing .pi.-acid character of the amines (A) on the dipeptide (L) deprotonation in the ternary complex (CuAL-H) is discussed. Electrochem. studies of the binary complex Cu-en and of the ternary complex Cu-en-gg were carried out in aq. medium. The formation of 2 different ternary species at different pH with different redn. potentials is obsd.

L5 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:296345 CAPLUS
DOCUMENT NUMBER: 123:46644
TITLE: Ternary metal(II) complexes with tyrosine-containing dipeptides. Structures of copper(II) and palladium(II) complexes involving L-tyrosylglycine and stabilization of copper(II) complexes due to intramolecular aromatic ring stacking. [Erratum to document cited in CA119:285034]
AUTHOR(S): Sugimori, Tamotsu; Shibakawa, Kimio; Masuda, Hideki; Odani, Akira; Yamauchi, Osamu
CORPORATE SOURCE: Fac. Sci., Nagoya Univ., Nagoya, 464-01, Japan
SOURCE: Inorganic Chemistry (1994), 33(17), 3848
CODEN: INOCAJ; ISSN: 0020-1669
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The errors were not reflected in the abstr. or the index ent s.

L5 ANSWER 4 OF 7 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 93322395 MEDLINE
DOCUMENT NUMBER: 93322395 PubMed ID: 8331135
TITLE: Electrochemical detection of dipeptides with selectivity against amino acids.
AUTHOR: Weber S G; Tsai H; Sandberg M
CORPORATE SOURCE: Department of Chemistry, University of Pittsburgh, PA 15260.
CONTRACT NUMBER: GM-44842 (NIGMS)
SOURCE: JOURNAL OF CHROMATOGRAPHY, (1993 May 21) 638 (1) 1-8.
Journal code: 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199308
ENTRY DATE: Entered STN: 19930826
Last Updated on STN: 19970203
Entered Medline: 19930817

AB Electrolysis of a basic mobile phase containing biuret reagent [Cu(II) and a tartrate salt] at high (> ***1*** . ***2*** V vs. Ag/AgCl) potentials modifies the glassy carbon electrode. This modified anode oxidizes ***dipeptides*** , yielding signals expected for a one-electron transfer, even at low (down to 0.7 V vs. Ag/AgCl) potentials and in the absence of intentionally added ***copper*** (II) ion in the reagent or mobile phase. The same modification demonstrates a selectivity to alpha- ***dipeptides*** over amino acids that is unprecedented. The product of the anodic reaction is reduced at a downstream cathode at low positive potentials. Sensitivities for several amino acids and ***dipeptides*** are reported under several conditions. Neither the anodic nor the cathodic signals for the buiret ***complex*** of the tripeptide Ala-Ala-Ala are significantly altered because of the modification.

L5 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1990:66327 BIOSIS
DOCUMENT NUMBER: BA89:34153
TITLE: ESR STUDY OF COPPER-II COMPLEXES OF X GLYCINE AND GLYCYL-X TYPE DIPEPTIDES AND RELATED TRIPEPTIDES VARIATION OF COORDINATION MODES WITH LIGAND EXCESS AND PH IN FLUID AND FROZEN AQUEOUS SOLUTIONS.
AUTHOR(S): SZABO-PLANKA T; PEINTLER G; ROCKENBAUER A; GYOR M; VARGA-FABIAN M; INSTITORISZ L; BALAZSPIRI L
CORPORATE SOURCE: INST. GENERAL PHYSICAL CHEM., ATTILA JOZSEF UNIV., P.O. BOX 105, H-6701 SZEGED, HUNGARY.
SOURCE: J CHEM SOC DALTON TRANS, (1989) 0 (10), 1925-1932.
CODEN: JCDTBI. ISSN: 0300-9246.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB Co-ordination modes for the various ***copper*** (II) ***complexes*** of glycine(Gly)-containing di- and tripeptides (HL) with non-co-ordinating side-chains have been investigated. The e.s.r. spectra of predominant species at 1: ***1*** , ***2*** :1, and 50:1 ligand:metal concentration ratios in the region pH .apprxeq. 6-13 have been recorded in fluid and frozen aqueous solutions, and evaluated by computer simulation. The energies of the d-d electronic transitions have been determined by Gaussian analysis of the visible absorption spectra. Molecular-orbital coefficients characteristic of metal-ligand bonds for the various 1:1 and ***1*** : ***2*** ***complexes*** have been calculated assuming effective D4h symmetry. At ligand excess in alkaline solution, the temperature strongly affects the chemical equilibria: low temperature promotes the formation of ***1*** : ***2*** ***complexes*** : [Cu(LH-1)L]- at pH .apprxeq. 9, and [Cyu(LH- ***1***) ***2***]2- at pH .apprxeq. 13 in the case of X-Gly type ***dipeptides*** . In the predominant isomers of these ***complexes*** one of the ***dipeptide*** molecules is co-ordinated equatorially through its amino nitrogen, deprotonated peptide nitrogen, and carboxylate oxygen atoms. The amino group of the other ***dipeptide*** occupies an axial position, while the fourth equatorial donor atom is either the peptide oxygen (pH .apprxeq. 9) or the deprotonated peptide nitrogen (pH .apprxeq. 13) of the

second ligand. In the latter case, axial co-ordination of the second carboxylate group is also likely. Competition can be observed between the the .sigma. and .pi. bonds in the equatorial plane on the one hand, and between the .sigma. bonds of different symmetries on the other hand. The influence of the co-ordination modes, the type of ligand, and the temperature on the covalent character of the metal-ligand bonds is discussed.

L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1943:26813 CAPLUS
DOCUMENT NUMBER: 37:26813
ORIGINAL REFERENCE NO.: 37:4303h-i,4304a
TITLE: Spectrography of the biuret complex as a method of investigating protein. IV. Absorption spectra of copper complexes of some peptides and their derivatives
AUTHOR(S): Gavrilov, N. I.; Plekhan, M. I.; Poddubnaya, N. A.
SOURCE: Bull. acad. sci. U. R. S. S., Classe sci. chim. (1941) 127-36
From: Chem. Zentr. 1942, II, 385-6.
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Three ***complexes*** can be formed from peptides: blue (absorption max. 630-693 m.mu.), violet (582 m.mu.) and red (505-530 m.mu.). These correspond to the types of di-, tri- and tetrapeptide (biuret). The ***complexes*** further show different absorption intensities in the visible spectrum, which increases proportionally from di- to tetrapeptide. The formation of ***complexes*** stops in the presence of a peptide surplus. Titration with ***copper*** acetate permits observation of the formation of ***complexes*** of tri-, tetra- and pentapeptide with a ***copper*** : peptide ratio of 1:1. For biuret the ratio is ***1*** : ***2*** , for ***dipeptides*** according to titration 1:1.7 and according to intensity 1:1.4. Acetylated ***dipeptide*** can form ***complexes*** with a Cu:peptide ratio of 1:8 and 1:11. Substitution of H by NH2 in the acetyl group of the peptide does not change the position of the max. but changes the height of the absorption intensity.

L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1916:3925 CAPLUS
DOCUMENT NUMBER: 10:3925
ORIGINAL REFERENCE NO.: 10:765c-i,766a
TITLE: Spectrophotometric study of copper complexes and the biuret reaction
AUTHOR(S): Kober, Philip A.; Haw, Arthur B.
SOURCE: J. Am. Chem. Soc. (1916), 38, 457-72
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C. A. 7, 3976; 9, 3252. It has been found by K. and his colleagues that the Cu ***complexes*** of NH2 derivs. and other similar substances can be divided into 3 classes: (1) blue, (2) purple or "semi-biuret," and (3) red or "biuret;" in (***1***) ***2*** N groups (amino, imino, imide or amide) are so placed that by forming "stable" rings they can combine with the Cu; in (2) there are 3 and in (3) 4 such groups. As the coordination no. of Cu is 4, in (2) an aquo or HO group is probably attached to the Cu besides the .3 N groups, and in (1) probably 2 HO groups are attached to the Cu. To establish the theory, it must be shown that the absorption spectra agree with the macroscopical observations and that it is really the N groups which produce the characteristic colors. The present paper deals largely with the 1st line of proof. In the ultraviolet the absorption is general and variations in the constitution of the ***complexes*** cannot be followed by quant. spectroscopy. In the visible spectrum the absorption curves were quant. detd. by means of a sector photometer and a high dispersion spectroscope on the basis of Talbot's law of rotating sectors. The results are probably accurate only to within 2%. The Cu ***complexes*** of 5 NH2 acids and 4 ***dipeptides*** in neutral soln., of 5 tripeptides and 2 tetrapeptides in neutral, faintly alk. and strongly alk. soln., and of egg albumen, edestin, casein and biuret in strongly alk. soln. were studied and the results are reported in curves. The amt. and nature of the absorption of a given ***complex*** depends somewhat on the concn. of

HO ions; in the tetrapeptide the red color is only faintly developed in the weaker alkali and more strongly in the more concd. alkali, while the reverse is true for the tripeptides. There are 3 types of absorption curves: beginning at about 480, 459 and 443 .mu..mu., resp., with max. at 630, 540 and 505 .mu..mu.. Diglycylglycine in faintly alk. soln. gives the semi-biuret color as strongly as the other tripeptides, Fischer's statement that it is an exception probably being due to the fact that he used strong alkali in making the biuret test. The protein ***complexes*** in strongly alkaline soln. give practically the same curves as tripeptides in faintly alk. soln. K. and H. conclude that the "biuret reaction" is no other than a ***complex*** formation with Cu and, as far as color formation is concerned, no decompn. of the protein is involved, and that the protein configurations are such that they permit only 3 N groups to form rings with Cu; therefore the protein mol. must be aggregated and is not in the form of long free chains or branches of peptides or conjugated NH2 acids. Oxy or HO ***complexes*** of Cu, no matter what their configuration, are all blue or green, never red, and are characterized by their relative instability in alk. solns., and, on the other hand, that red colors are due to N groups is indicated by the fact that substances possessing only N and no O give a red biuret reaction (diguanidine ***copper***); ***complexes*** containing a deficiency of O groups but sufficient N groups give a red biuret reaction; there is a great parallelism between the number of N groups available for combination with the Cu and the amt. of the red color.

```
=> s anti-tumor or anti-neoplastic
L6       58438 ANTI-TUMOR OR ANTI-NEOPLASTIC

=> s shark cartilage
L7         655 SHARK CARTILAGE

=> s l6 (p) l7
L8          23 L6 (P) L7

=> d his

     (FILE 'HOME' ENTERED AT 15:17:39 ON 21 APR 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
     15:18:00 ON 21 APR 2003
L1          4690 S ANTI-ANGIOGENIC
L2       1068654 S COPPER
L3           560 S L2 (P) DIPEPTIDE (P) (COMPLEX? OR CHELAT?)
L4            14 S L3 (P) (1:2)
L5             7 DUPLICATE REMOVE L4 (7 DUPLICATES REMOVED)
L6         58438 S ANTI-TUMOR OR ANTI-NEOPLASTIC
L7           655 S SHARK CARTILAGE
L8            23 S L6 (P) L7

=> s l3 and l8
L9             0 L3 AND L8

=> d his

     (FILE 'HOME' ENTERED AT 15:17:39 ON 21 APR 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
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L1          4690 S ANTI-ANGIOGENIC
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L3           560 S L2 (P) DIPEPTIDE (P) (COMPLEX? OR CHELAT?)
L4            14 S L3 (P) (1:2)
L5             7 DUPLICATE REMOVE L4 (7 DUPLICATES REMOVED)
L6         58438 S ANTI-TUMOR OR ANTI-NEOPLASTIC
L7           655 S SHARK CARTILAGE
L8            23 S L6 (P) L7
L9             0 S L3 AND L8

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